THEORETICAL COMPUTER SCIENCE
Algorithms, automata, complexity and games

VOLUME 144, NUMBERS 1–2, 26 JUNE 1995

Special Volume on Mathematical Analysis of Algorithms
Dedicated to D.E. Knuth

Guest Editors: H. Prodinger and W. Szpankowski

Abstracted/Indexed in: ACM Computing Reviews, Compuscience, Computer Abstracts, Current Contents: Engineering, Technology & Applied Science, Engineering Index/Compendex, INSPEC Information Services, Mathematical Reviews, Zentralblatt für Mathematik

CONTENTS

H. Prodinger and W. Szpankowski
Preface 1

Ph. Flajolet, X. Gourdon and P. Dumas
Mellin transforms and asymptotics: Harmonic sums 3

F. Bergeron and U. Sattler
Constructible differentially finite algebraic series in several variables 59

M. Drmota and M. Soria
Marking in combinatorial constructions: Generating functions and limiting distributions 67

Ph. Flajolet and R. Sedgewick
Mellin transforms and asymptotics: Finite differences and Rice's integrals 101

D. Gardy and G. Louchard
Dynamic analysis of some relational databases parameters 125

P. Jacquet and W. Szpankowski
Asymptotic behaviour of the Lempil–Ziv parsing scheme in digital search trees 161

P. Kirschenhofer, C. Martínez and H. Prodinger
Analysis of an optimized search algorithm for skip lists 199

H.M. Mahmoud and R.T. Smythe
Probabilistic analysis of bucket recursive trees 221

W. Schachinger
On the variance of a class of inductive valuations of data structures for digital search 251

U. Schmid
Random trees in queueing systems with deadlines 277

Author Index Volume 144 315